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**SCIENTIFIC INFORMATION REPORT  
CHINESE SCIENCE**

(31)

Summary No. 4974

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SCIENTIFIC INFORMATION REPORT

Chinese Science (31)

This is a serialized report consisting of unevaluated information prepared as abstracts, summaries, and translations from recent publications of the Sino-Soviet Bloc countries. Individual items are unclassified unless otherwise indicated.

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MEDICAL AND BIOLOGICAL SCIENCES

HEMAGGLUTINATION TEST IN SEROLOGICAL DIAGNOSIS OF TYPHUS CONSIDERED USEFUL  
-- Peiping, Wei-sheng-wu Hsueh-pao (Acta Microbiologica Sinica), Vol 9,  
No 1, Feb 63, pp 71-75

[The following is an English-language summary appearing at the end of a Chinese article, entitled "Studies on the Serological Diagnosis of Typhus Fever. (1) Studies of Hemagglutination Test With the Erythrocyte Sensitizing Substance of Typhus Rickettsia in Clinical Diagnosis," by Li Tsai-lien (2621/0961/6647) of the Department of Microbiology, Shantung Medical College; Chu Yu-lung (2612/3768/3891) and Keng Wen-chin (5105/2429/3866) of the Chemical Laboratory of the Shantung Medical College Hospital; and Ch'en K'o-chung (7115/0344/1813), Hsu Chen-ch'uan (1776/2182/3123), Hsiao Kung (5618/3797), and Su Ju-chen (5685/0320/3791), physicians of the Shantung Medical College Hospital. Other data contained in source are also given below.]

Making use of the hemagglutination method first described by S. N. Chang in 1953, an erythrocyte sensitizing substance was obtained from the mouse lung vaccine which contains *R. prowazekii*. Group O erythrocytes were sensitized with the substance, and sera of 36 typhus patients were examined for hemagglutinating antibodies. It was found that positive hemagglutinating action was given by all these 36 clinically diagnosed cases, with the titer ranging from 1:50 to 1: 25,600. On the other hand, none of the sera from 233 non-typhus patients and normal persons serving as controls showed positive reaction in serum dilution of 1:50. When compared with the results obtained by the Weil-Felix reaction and by the complement fixation tests, hemagglutination tests appear to be of higher sensitivity and of greater specificity. Thus, the practical value of the hemagglutination tests in serological diagnosis of typhus fever is clearly evident.

The authors used six Chinese- and six English-language sources, dated 1946-1959. This paper was submitted for publication 26 July 1962. The authors expressed their thanks to Ching Yung-chih (5427/3057/1807), director of the Microbiological Teaching and Research Section of Shantung Medical College, for reading and correcting their paper.

UTILIZATION OF NEW DRUG FOR ASIAN LUNG FLUKE DISEASE -- Peiping, Kuang-ming  
Jih-pao, 25 Jul 63, p 2

Recently, the infections and Epidemic Disease Teaching and Research Section of the Chungking Medical College, in close cooperation with the quarantine station at Sui Ning Hsien in Szechwan Province, carried out an epidemiological investigation on the Asian lung fluke disease and has adopted a new drug, hexachlorophenol anthelmintic, which has achieved marked results.

In the past, there has been no specific drug for the treatment of the Asian lung fluke disease. The infections and Epidemic Disease Teaching and Research Section of the Chungking Medical College has adopted anthelmintic hexachlorophenol, which was synthesized as a treatment by the State-Operated Hsi-nan Pharmaceutical Plant. The circumstances of 105 child patients were explained. After treatment, their livers and gall bladders had shrunk, but, on the average, the circumstances that followed took a turn for the better. At present, hexachlorophenol is the most effective anthelmintic for the treatment of the disease, and it is convenient, as the drug is taken orally. Moreover, the treatment period is shortened and the price of the drug is reasonable.

This teaching and research section has gone through the investigation and treatment of the Asian lung fluke disease epidemic and, at present, has formulated various types of precautionary measures concerning the epidemic areas. (Liu Yu'eh-han 0491/4766/5060)

GENERAL DESCRIPTION OF NEW CHINESE PERIODICAL -- Shanghai, Cho-shang Wen-chai,  
1 May 62, p 1

[The following information appeared in the preface of the No 1, 1962, issue of a new medical journal published in Shanghai. The preface was dated February 1962 and was signed by Ma Yung-chiang (7456/3057/3068) and Shih Chi-hsiang (0670/3444/3276).]

Cho-shang Wen-chri (Abstracts on Burns) is published in response to the needs of persons who treat burns and do research work. This issue presents material concerning burns collected from periodicals published in the Soviet Union, England, the US, France, Germany, and Japan during the period September 1959-March 1961. The literature published between September 1959 and October 1960 is presented in this issue as review-type reports; the literature of November 1960-March 1961, as abstracts or extracts and translations. Based on the method of reported and subject matter, the abstracts are divided into ten sections as follows: reviews of the literature, summaries, shock and water-electrolyte balance, early treatment, blood poisoning and septicemia, metabolic disturbances, skin grafts and plastic surgery, complications, and clinical treatment and animal experimentation. Only a few essential illustrations are reproduced in the translations. Other items such as X-rays and pictures of morbid tissue are excluded.

The work [of this journal] is conducted under the direct leadership of the Burns Subcommittee of the Shanghai Municipal Scientific and Technical Committee (Shang-hai K'o-hsueh Chi-shu Wei-yuan-hui Cho-shang Chuan-t'i Hsiao-tsü; 0006/3189/4430/1331/5890/1201/0765/2585/3504/0281/1413/7344/1420/4809). Its leadership and the encouragement and the backing of the party branches and administrative chiefs of the Second Military Medical College, Shanghai, and the Shanghai Second Medical College made possible the publication of the present issue. All manuscripts were checked [against the original articles] by the following persons, handling languages as indicated: Ma Yung-chiang (7456/3057/3068), English; Shih Chi-hsiang (0670/3444/3276), French; Kao Chien (7559/7035) and Liu Shih-k'ang (0491/0013/1660), Russian; Fang hih-yang (2455/0037/2254), German; and Chang Ching-feng (1728/7234/1496) and Chung Chien-p'ing (0112/0494/1627), Japanese.

The Surgery Teaching and Research Section, Second Military Medical College, Shanghai; Ma Yung-chiang (7456/3057/3068).

The Surgery Teaching and Research Section of the Second Medical College, Shanghai; Shih Chi-hsiang (0670/3444/3276). (OFFICIAL USE ONLY)

TWO NEW SPECIES OF MITES FOUND --- Peiping, Science Abstracts of China, Biological Science, No 1, 1963, p 25

[The following is a summary of an English-language abstract of an article, entitled "Two New Mites of the Genus *Hirstionyssus* Fonseca, 1948 (Acarina, Liponyssidae)," by Wang Tung-ch'ing (3769/2415/3237), which originally appeared in Acta Zoologica Sinica, Volume 14, No 3, 1962, pages 411-416.]

This abstract gives the measurements for various Parts of the two mites. One, *Hirstionyssus tamiopis* sp. nov., has for its host *Tamiops swinhoei* monticolus. The other, *Hirstionyssus sunci* sp. Nov., has for its host *Suncus murinus* and sometimes *Rattus norvegicus*.

NEW SPECIES OF TROMBICULID MITES --- Peiping, Science Abstracts of China, Biological Science No. 1, 1963, pp 24-25

[The following is an English-language abstract of an article, entitled "On Three New Species and One New Record of the Trombiculid Mites From China," by Wang Tun-ch'ing (3769/2415/3237), which was originally published in Acta Entomologica Sinica, Volume 11, No 3, 1962, pages 269-276.]

The present paper reports four species of scrub mites collected from *Rattus losea exiguus* A. B. Howell, namely, *Gahliepia* (*Gateria*) *pintanensis* sp. n., *Euschongastia cheni* sp. n., *Schongastia obtusispura* sp. n., and *Tragardhula tamiyai* (Philip and Fuller, 1950). The first three are new species, and the last one is reported for the first time from China.

EXPERIMENTS ON MOVEMENTS OF TROMBICULID MITES -- Peiping, Science Abstracts of China, Biological Science, No 1, 1963, pp 19-20

[The following is an English-language abstract of an article, entitled "Some Experiments on the Rate of Movement of Certain Trombiculid Mites," by Ch'en Hsin-t'ao (7115/1800/7118) and Hsu Ping-k'un (1776/4426/6924), which was originally published in Acta Zoologica Sinica, Volume 14, No 3, 1962, pages 307-313.]

Controlled experiments have been conducted to determine the rate of movement of the adults, nymphs, and larvae of *trombicula akamushi* var. *deliensis* and *Acomatacarus majesticus*. The results indicate that the rate of movement closely parallels the degrees of temperature -- the lower the temperature, the lower the rate of movement; and from the curve so constructed, it can be readily seen that as a result of the fall of temperature, the rate of movement becomes lower in a straight line.

The results of the experiments also indicate that under exactly the same environmental conditions, *T. akamushi* var. *deliensis* and *A. majesticus* vary considerably in their rate of movement, and the difference appears to us not as a result of the speed of the alternating movement of the legs which, according to certain authors, determine the rate of movement, but is most probably due to the length of the legs which are longer in *A. majesticus*. The latter, therefore, can move faster than *T. akamushi* var. *deliensis*.

NEW FLEA DISCOVERED IN TIBET -- Peiping, Science Abstracts of China, Biological Science, No 2, 1963, p 22

[The following is an English-language abstract of an article, entitled "A New Species of Ceratophyllus From Tibet, China (Aphaniptera: Ceratophyllidae)" by Liu Lien-chu (0491/6647/3796) and Wu Hou-yung (0702/0624/3057), which was originally published in Acta Entomologica Sinica, Volume 11, No 3, 1962, 287-290.]

A new flea, *Ceratophyllus chutsensis* sp. nov., is herewith described. The types were collected from the burrows of *Ochotona* sp. from Chutsa, Tibet, China.

The new species is allied to *Ceratophyllus gallinae* Schr., 1803, *C. dimi* Mikulin, 1958, and *C. passerinus* Li, 1951, but is easily distinguished from all the above-mentioned species and other Chinese species of this subgenus by the following characteristics: (1) the number, arrangement, and stoutness of the spiniform bristles on the hind margin of the movable finger, (2) the presence of 6-7 stout bristles on the apex of the eighth sternite of the male, (3) the shape of the membranous appendage of the eighth sternite in the male, and (4) the more or less right angled curvature of the sclerotinized portion of the bursa copulatrix of a female.

BACTERIAL INSECTICIDE TRIED FOR PREVENTION AND CONTROL OF INSECTS -- Peiping, Kuang-ming Jih-pao, 26 Jul 63, p 3

The Hupeh Provincial Institute of Agricultural Sciences recently tested a bacterial insecticide called "Ch'ing Ch'ung Chun (7230/5722/5497)" (green caterpillar bacteria).

The bacterial insecticide is from 89 percent to 98 percent as effective as "666." It is used to kill the green caterpillar pests and many other insects.

This bacterial insecticide is produced by the culture of "Insect Bacterium No 3," which was introduced from abroad.

NEW INSECTICIDE IS SYNTHESIZED FOR KILLING FLIES -- Peiping, Jen-min Jih-pao, 5 Jul 63, p 2

Recently, the Institute of Zoology, Chinese Academy of Sciences, synthesized a new insecticide for the control of house flies.

The principal insecticides China is now using to control flies are 666, DDT, and dipterex.

The new insecticide is designated as S-101. The greatest advantage of this drug is that, at present, the flies still have no resistance to this new drug as they do to 666, DDT, and dipterex. The speed in killing the flies is also much faster than with 666.

BOTANICAL GARDENS IN THE HIGH MOUNTAINS OF LI-CHIANG -- Kuang-ming Jih-pao, 7 Jul 63, p 2

Scientific personnel have started stepped-up research activities at the Li-chiang Kao-shan Botanical Gardens (Li-chiang Kao-shan Chih-wu-yuan; 7787/3068/7559/1472/2783/3670/0954) in Shan Lu (1472/7785) of the Yu-lung-hsueh Shan in the northwest section of Yunnan Province.

Scientific research activities have been continuing since the establishment of these botanical gardens in 1959. Scientists have gone out to investigate the botanical resources and collect botanical specimens. They have already collected over 1,500 specimens.

TECHNICAL SCIENCES

CHINESE TRANSLATION OF FOREIGN PETROLEUM RESEARCH -- Peiping, Shih-yu-tse-tsung, (Collection of Translations on Petroleum), No 3, 2 Mar 63

[The following eight articles from English and Russian publications have been translated into Chinese and published in the above source.]

1. "Application of Principles for Isotropic Materials in the Analysis and Development of Water Drive Oil Fields," abstracted and translated by Chang Chao-ch'en (1728/2600/3819). The contents of this article originally appeared in the following US sources: (1) Syvain J. Pirson, Oil Reservoir Engineering, 1958, Chapter 12,; (2) Craft and Hawkins, Applied Petroleum Reservoir Engineering, 1959, chapters 3, 4, and 5,; and (3) Trans. AIME, 1953, Vol 198, pp 51-60; 1943, Vol 151, pp 57-72.

2. "Determination of Water Contents in Oil Fields," an abstract translation by P'ei Wei (0160/7279) from the same three sources mentioned in article No 1 above.

3. "Regulating the Amount of Liquid Mixture Produced From Elastic Water Drive Oil Fields," originally appearing in the Soviet magazine Bureniye Skhvazhin i Razrabotka Neftyanikh i Gazovikh Mestorozhdeniy (Drilling of Wells and Processing of Petroleum and Gas Deposits), 1962, pages 82-94, published by Gostoptekhizdat (State Scientific and Technical Publishing House of the Petroleum and Mineral-Fuel Industry) and translated by Lu Ch'en-ting (7120/2182/1353).

4. "Method of Predicting a Comparatively Good Water Flow," originally appearing in the US magazine Secondary Petroleum Recovery Monthly, May, June, and July 1962, abstracted and translated by Hsu Hsien-chung (1776/3759/0022).

5. "Effects of Nonuniform Rates of Fluid Penetration Into Earth Stratum in Respect to Changes in Fluid Production Capacity," by Z. K. Li-a-pin-ni-na, originally appearing in the Soviet publication Collection of Scientific and Technological Articles on Petroleum Production, Volume 15, 1961, pages 79-82, and translated by Liu Wei-ning (0491/1414/1380).

6. "Influence of Dynamic Pressure Upon the Encroachment of Several Definite Earth Layers," by J. E. Kao-nai-te, originally appearing in the US magazine Petroleum Engineering, February 1962, and translated by Shen Fu-ch'uan (3088/4395/2938).

C-O-N-F-I-D-E-N-T-I-A-L

7. "Research on Rock Core Analysis Material After Pumping Water Into Oil-Bearing Sand Strata," by R. C. O-lao-ho, et al., originally appearing in the US magazine Petroleum Technology, February 1962, and translated by Hsu Huai-ta (1776/2037/1129).
8. "Drawing Distinction Between Injected Water Layers and Pressurized Water Layers Based on Data of Well Measurement," by A. P. An-pi-lo-ko-fu, originally appearing in the Soviet magazine, Geophysics of Mining Areas, 32d edition, pages 152-181, and translated by Chang Yu-t-tien (1726/7183/3944).
9. "Technological Information" [Following are brief abstracts from foreign scientific papers compiled by the Research Information Office of the Petroleum Industry Department of the Institute of Petroleum, Chinese Academy of Sciences:
- A. "Geology Enters Period of High-Speed Computer," originally appearing in the Soviet magazine Geology of Petroleum and Natural Gas, No 12, 1962, pages 58-59, and translated by Sun Chi-yuan (1327/3444/0337).
- B. "Geological Subaqueous Investigation of Shallow Seas," originally appearing in the US magazine Journal on Petroleum and Gas, Volume 60, No 42, 1962, page 265, and translated by Wu Wei (4702/0251).
- C. "Using Magnetization To Inspect Flaws in Drill-Bits," originally appearing in the Soviet magazine Express Information on Science and Technology -- Petroleum Industry Series, No 47, 1962, and translated by Chao Kuo-liang (6392/0948/2856).
- D. "Using Mobile Drilling Machines in Desert Areas," originally appearing in the Soviet magazine Express Information on Science and Technology -- Petroleum Industry Series, No 48, 1962, and translated by Chao Kuo-liang (6392/0948/2856).
- E. "Automation of Production in Five US Oil Fields," originally appearing in the US magazine Journal on Petroleum and Gas, Volume 60, No 41, 1962, page 58, and translated by Ch'ou Chen-teng (0092/2812/3397).
- F. "Pressurized Hot Liquid at Bottom of Well by Electro-Thermal Method," originally appearing in the Soviet magazine Petroleum Industries, Volume 60, No 5, 1962, pages 62-63, and translated by Wang Ta (3769/6671).
- G. "Determination of Coefficient of Error in Petroleum Deposits," originally appearing in the Soviet magazine Express Information on Science and Technology -- Petroleum Industry Series, No 47, 1962, and translated by Ch'ou Chen-teng (0092/2182/3397). (FOR OFFICIAL USE ONLY)

EXPERIMENTS ON CEMENT PRODUCTS SUCCESSFUL -- Peiping, Kuang-ming Jih-pao,  
8 Jul 63, p 1

Recently, in Wuhan, the Chinese Society of Silicates held China's first conference on cement products to summarize the achievements in the field of cement research.

For the past few years, scientific and technical workers in various areas have studied and experimented with many cement products for the needs of agriculture and industry. According to statistics of the departments concerned, several tens of cement products have been successfully studied and experimented with, including reinforced concrete railway ties, mine shaft supports, concrete barges, engine mounts, various types of concrete pipe, construction materials for residential buildings, etc. The majority of these products have been put into mass production. In 1962, the national production of cement products reached 320,000 cubic meters, with a noticeable effect on support to agricultural and industrial production and conservation of lumber and steel.

EARTH SCIENCES

PHYSICAL ANALYSIS OF ATMOSPHERIC PROCESSES -- Peiping, Ch'i-hsiang Hsueh-pao, Vol 33, No 2, May 63, pp 163-174

[The following is an English abstract appearing at the end of an article entitled "Adaptive and Developmental Processes of the Atmosphere I. Physical Analysis and Linear Theories," by TSENG Ch'ing-ts'un (2582/1967/1317), Institute of Geophysics, Chinese Academy of Sciences.]

In this paper, the author applies complete sets of nonlinear equations to the study of adaptive and developmental processes occurring in the atmosphere. The author argues that it is only through the use of complete sets of dynamic and thermodynamic equations that the mechanism of the processes can be described with sufficient accuracy.

This paper was received for publication in September 1962; it was prepared in 1959-1960 under the direction of I. A. Kidel', corresponding member of the Academy of Sciences USSR.

EVOLUTION OF CUMULUS CLOUD EXAMINED -- Peiping, Ch'i-hsiang Hsueh-pao, Vol 33, No 2, May 63, pp 257-270

[The following is an English abstract, appearing at the end of an article entitled "Studies Made on the Evolutionary Characteristics of Individual Cumulus," by CHEN Jui-jung (7115/3843/2837), Institute of Geophysics, Chinese Academy of Sciences.]

In this paper, the evolution of individual cumulus is studied by means of basic equations involving the drag effect of drops and phase transformation of water (including the evaporation caused by entrainment). With an individual cumulus being taken as a uniform cloudy parcel, calculations are made of the thermal conditions and other properties during the process of evolution. It is shown that the effects of drag and phase transformation on cloud development are important. The theoretical results are discussed and compared with observations made in China; fair agreement is found in many aspects.

This paper was received for publication in July 1962.

METHOD OF CALCULATING OZONE DISTRIBUTION QUESTIONED -- Peiping, Scientia Sinica, Vol 12, No 7, Jul 63, pp 1065-1070

[The following is an English abstract which appears at the end of an article, entitled "The Nonuniqueness of the Solution for the Vertical Distribution of Ozone From the Calculation by the Umkehr Method B," by WEI Ting-wen (7614/7844/2429), Institute of Geophysics and Meteorology, Chinese Academy of Sciences.]

This paper discusses the umkehr method B developed by Ramanathan and Dave in 1957. This is one of the usual methods for measuring the vertical distribution of atmospheric ozone and has been in world-wide use up to the present. It is here demonstrated that several substantially different vertical distributions of ozone can be obtained for one observed umkehr curve by the calculations using method B. Thus, the unique vertical distribution of ozone in the atmosphere cannot be obtained with this method.

The author expresses his thanks to Prof J. J. Jaw [CHAO Chiu-chang (6392/0046/4545)?] and Prof T. C. Yeh [YEH Tu-cheng (5509/4648/2973)?] for their guidance. This paper was first published in Chinese in Ti-ch'iu Wu-li Hsueh-pao (Acta Geophysica Sinica), Volume 11, No 2, December 1962, pages 123-135.

FORMATION OF BLOCKING HIGHS -- Peiping, Scientia Sinica, Vol 12, No 3, Mar 63, pp 391-402

[The following is an English abstract appearing at the end of an article entitled "On the Nonlinear Effects in the Formation of Blocking Highs," by YEH Tu-cheng (5509/4648/2973) and CH'EN Hsiung-shan (7115/7160/1472), both of the Institute of Geophysics and Meteorology, Chinese Academy of Sciences.]

The authors study the development of long waves, retaining the generally ignored nonlinear terms in the vorticity and thermodynamic equations while discarding the assumption of a final steady state. It is shown theoretically that the mutual interaction of these disturbances is very important in the formation of blocking highs. The most recent bibliographic entry is dated 1959.

FURTHER STUDIES ON BLOCKING HIGH FORMATION -- Peiping, Ch'i-hsiang Hsueh-pao, Vol 33, No 2, May 63, pp 144-152

[The following is an abstract of an article, entitled "On the Nonlinear Effect in the Formation of Blocking Highs," by YEH Tu-cheng (509/4648/2973) and CH'EN Hsiung-shan (7115/7160/1472), both of the Institute of Geophysics and Meteorology, Chinese Academy of Sciences.]

In this paper, the arrested development of an unstable disturbance is discussed. The disturbance has a nonlinear feedback effect upon the basic current; as a result, the disturbance is unable to draw further energy (static or kinetic) from the basic current, causing the development of the disturbance to be arrested. A first approximation of the nonlinear term is used as the nonlinear term in the solution of vorticity equations; a second approximation is used in the solution of the perturbation equation. Over short periods of time, the first approximation is sufficiently accurate. As the time period increases, the accuracy of the nonlinear term is increasingly important, causing a basic change in the form of the first approximation of the field-of-flow which appears as a closed-high center and  $\Omega$ -shaped field-of-flow.

The latest bibliographic entry is dated 1961.

An editorial note states that a paper reporting this work was first received in July 1962 and that the revised manuscript (apparently the present paper) was received in September 1962.

ISOBARIC STUDIES MADE OF 500 mb LEVEL -- Peiping, Ch'i-hsiang Hsueh-pao, Vol 33, No 2, May 63, pp 231-243

[The following is an abstract of an article, entitled "Preliminary Results in the Use of Chebyshev's Polynomial in Studies on the Average Monthly Conditions at the 500 mb Isobaric Level," by CHANG Chia-ch'eng (1728/1367/6134) of the Institute of Meteorological Sciences, Central Meteorological Bureau; and CHOU Chia-pin (0719/1367/2430), HUANG Wen-chieh (7806/2429/2638), and MA Wei-hua (7456/4850/5478), all of the Geophysics Department, Peking University.]

In this paper, the authors employ Chebyshev's Polynomial in the analysis of the average monthly conditions at the 500 millibar (mb) level during the years 1952-1961, as well as the characteristic seasonal precipitation and humidity in the middle and lower reaches of the Yangtze River. The analytical error and its correction are discussed, as is the effect of Chebyshev's coefficient upon circulatory differentiation. The time sequence of Chebyshev's coefficient and the circulatory type were

used to explain the finite, temporal dispersion of Markov's bond. The transference probability and the absolute probability of the coefficient and the circulatory type are computed; the error of their result estimated, and the properties of this bond discussed. The transference probability is used to predict future conditions.

This paper was received for publication originally in August 1962; the revised draft was received in November 1962. The authors acknowledged the assistance of YANG Chien-ch'u (2799/7003/0443) of the Institute of Geophysics, Chinese Academy of Sciences; CHANG Yao-p'ing (1728/1031/1656) and LIU Ch'ung-fei (4151/1504/7378), both of the Mathematics and Mechanics Department, Peking University; and WANG Shao-wu (3769/4871/2976) of the Geophysics Department, Peking University. The authors further acknowledged the assistance of TSENG Yu-szu (2582/0147/1835) of the Institute of Geophysics, Chinese Academy of Sciences, in the preparations of the diagrams; some of the computations were performed on the electronic computer of the Computational Mathematics Teaching and Research Section, Mathematics and Mechanics Department, Peking University.

C-O-N-F-I-D-E-N-T-I-A-L

CHINESE RESEARCH IN GEOLOGY -- Peiping, Chung-kuo Ti-chih (Chinese Geology), No 3, Mar 63, pp 3-9

[The following is an abstract of article, entitled "Distinguishing the Main Facies of the Secondary (Mesozoic) Era According to the Fusulina Family Group," by Sheng Chin-chang (4141/6855/4545).]

This article presents a vertical cross section of the fusulina family group of cretaceous animals of the Mesozoic period. The author says that there often exist certain degrees of difficulty in determining the exact reason for the abundant deposit of marine facies of carbonates in Kweichou and Kwangsi provinces and part of the mountainous areas in Szechwan Province, San-hsia region, and the western portion of Hunan Province. In 1959, Wang Yu (3769/6877) and others of the Institute of Paleontology and Geology went to Tzu-yun (Kweichou Province) to conduct a palaeontological study. They collected systematically a great number of samples of the fusulina formation.

Generally speaking, progressive change in the fusulina formations during the geological time scale was rather quick. This change was revealed in the interior structure of the fusulina shell formation. The shell structures of the principal types of fusulina formation of the mesozoic era found in the Tzu-yun area belonged to mainly four types, i.e., (1) Schwagerina-type which includes the Parafusulina, Schwagerina, Pseudo-fusulina, and Chusenella, (2) Neoschwagerina-type which includes the Cancellina, Neoschwagerina, Yabeina, Afghanelia, and Sumatrina, (3) Verbeekina, Paraverbeekina, Misellina, Neomisellina, Brevaxina, and Pseudodoliolina, and (4) Palaeofusulina-type which includes the Palaeofusulina, Codonofusiella, Dunbalula, Minojapanella, Lantschichites, and Wutuella.

At the conclusion of this paper, the author summarized his data in a simple chart giving the various species of the fusulina family group during the Upper and Lower Epochs of the Mesozoic Era.

In this article, four Chinese and two Japanese references were cited by the author, and also geologists such as T. K. Huang, J. S. Lee, R. Toriyama, and H. Yabe were mentioned.

SCIENTISTS GO TO SINKLAND PROVINCE FOR FIELD RESEARCH -- Peiping, Chin-jih Hsin-wen, 14 Jun 63, p 3

A group of scientists in Sinkiang on an investigation and research mission recently went to the rural areas, pastures, deserts, high mountain areas, and other areas to start a field investigation and research program with water, earth, pastures, and deserts as the focal points.

One ice and snow water conservation resource research team went to Ch'ang-chi Hui Autonomous Chou, which is north Sinkiang's most important food-producing area. The dry weather last year in the Ch'i-t'ai area of this chou was very severe, and the people of that area urgently hoped to clear it up by an investigation into the water conservation resources of that area for further utilization. The research personnel in that area will investigate the capacity and formation conditions of the high mountain's ice and snow resources, the circumstances of distribution and formation conditions of the lakes in the mountain area, and the possibility of adapting them as reservoirs.

The area of salinated land in Sinkiang Province is very large and occupies a comparatively large ratio of both the uncultivated areas and the reclaimed cultivated areas. To solve this key problem of developing agricultural production, the scientists have already gone to Ma-na-ssu in north Sinkiang, K'u-erh-lo in south Sinkiang, and other areas, studying the conditions of the occurrence of soil salinization and its distribution, as well as the types, basic characteristics, and ways to improve salinated soil.

RESEARCH TEAM ON UTILIZATION OF HIGH MOUNTAIN ICE AND SNOW HOLD FIRST MEETING  
-- Peiping, K'o-hsueh T'ung-pao, No 7, 1963, p 71

The Research Team on Utilization of High Mountain Ice and Snow (Kao-shan Ping-hsueh Li-yung Yen-chiu-tui; 7559/1472/0393/7185/0448/3938/4282/4496/7130, Chinese Academy of Sciences, and the Laboratory on Glaciers and Permafrost, Geography Research Institute, Chinese Academy of Sciences, held the first scientific and technological meeting in Lanchou to review results of scientific research in the last 5 years.

At the meeting, more than 70 papers and reports were read. Of this number, 14 were from foreign sources.

[A summary of Chinese research as revealed in the papers is presented in the article, but is omitted herein.]

CHEMISTRY AND CHEMICAL TECHNOLOGY

HIGH POLYMER LABORATORY OF CH'ENG-TU ENGINEERING COLLEGE SUPPORTS FRUGALITY POLICY -- Peiping, Kuang-ming Jih-pao, 15 May 63, p 2

Workers of the High Polymer Laboratory of the Department of Chemistry, Ch'eng-tu Engineering College, in support of the policy of operating schools frugally, made three rather satisfactory laboratories out of two empty buildings. This laboratory is now considered an advanced center in the city of Ch'eng-tu.

Six classes of some 190 high polymer chemistry students and physics students have been started successively by the laboratory to guarantee the proper handling of the teaching load. The instructors are engaged in important experimental research, and research students and undergraduates are engaged in research work for graduate theses.

When the laboratory was first established, there was no water or electricity. Relying solely on themselves, instructors, laboratory workers, and students together cut from a heap of waste material sections of steel pipes and tile pipes, water faucets, bricks, and other things, installed water pipes, electric lines, a ventilation system, a platform for scales, drain pipes, etc., and completed the basic construction of the laboratory. But those responsible for teaching faced further difficulties, especially in view of the shortage of equipment. For example, an agitator is indispensable for experiments on high polymer synthesis. They did have an old, defective electric agitator which could not in the least meet their requirements. Ingenuously, they made a water wheel agitator from an axle of a bicycle wheel and jar lids. With the money they saved on the cost of one electric agitator, they were able to make 30 water wheel agitators, which are economical and easy to use. They also made an eccentric agitator, small ball mills, an electric heater for boiling water, temperature-deformation equipment, and a constant temperature water bath -- altogether some 20 kinds of large and small pieces of equipment, representing a saving of more than 10,000 yuan.

They are unusually attentive to the maintenance, examination, and repair of equipment. Laboratory worker Liu Yung-sheng (0491/3056/4141) regularly takes care of the equipment. In the last 3 years, he has repaired about 50 pieces of equipment. They also take unusual care of glass apparatus. Laboratory worker Wu Man-yuan (0124/5585/0337) always is afraid of losing glass equipment. He thinks of ways of making small pieces out of large broken pieces. They are also very careful about reclaiming chemicals. The laboratory made its own ion exchange resin water purifier, which can make large quantities of ion free water to replace distilled water and which is sufficient to meet the needs of the laboratories in their own department and also to supply the analytical chemistry laboratories of other departments, as well as medical laboratories.

The instructors and laboratory workers in this laboratory all think of it as their own home. Each and every one is responsible for the overall task. They mutually combine supervision with administration and have established operating procedures which are not only convenient to administer, but also easy to comply with. Although there is a large variety of equipment and chemicals, everything is orderly. They not only manage things well and keep accounts well, but also are careful about maintenance, examination, and repair and see that a reasonable use is made of things.

ANNUAL PREPARATORY COMMITTEE OF THE CHEMICAL SOCIETY OF CHINA SOLICITS PAPERS -- Peiping, Hua-hsueh T'ung-pao (Chemistry Bulletin), No 3, Mar 63, back cover

The annual meeting of the Chemical Society of China will convene in August 1963. The requirements for the solicitation of papers by the annual meeting are as follows:

The papers to be submitted must have a creative nature. Work done in other countries, papers that have already been published, and papers that have been reported at nationwide technical conferences will not be allowed.

In response to the solicitation of papers, persons must submit abstracts by mail; the abstracts cannot have less than 500 or over 1,000 words. When necessary, the society may request the entire paper. The paper must have the approval of the author's organization.

Papers are to be mailed to Ch'en Jung-lo (7115/2837/2867), Box 2709, Peiping.

CHINESE RESEARCH ON METAL FUSION PROCESS -- Shanghai, K'o-hsueh Hua-pao, No 11, Nov 62, p 417

[Following is a full translation of an article, entitled "Fermentation of Metal," by Wu Cheng-yen (0702/2973/0917).]

In the fusion process of metal or metal alloy with the addition of some other metallic element such as titanium, barium, or zirconium, a gas is released when heat is applied to the substance -- like the fermentation of yeast in the making of "man-t'ou" [steamed buns]. In the fusion process of metal, the gas creates countless numbers of small gas pockets. During the quick cooling and solidification of metal in the fusion process, the small gas cavities are firmly retained, thus effecting the formation of countless numbers of pores.

For example, take the metal "aluminum." After subjecting this metal to the "fermentation" process, the weight of the original substance can be reduced 60-90 percent; it becomes very ductile and malleable, heat resisting, and anticorrosive; moreover, this material can be cut into pieces and finished into many kinds of articles. Because this alloy can be welded at low temperatures or glued together, it can be widely used in the aircraft, shipbuilding, construction engineering, and other industries. This lightweight composite material has now opened up a new field in metallurgy. (FOR OFFICIAL USE ONLY)

RESEARCH ON HEAT TREATMENT -- Peiping, Chung-kuo K'o-hsueh Wen-chai (Science Abstracts of China -- Technical Sciences), No 2, 1963, pp 14-15

[The following is an English abstract of an article, entitled "Effect of Heat Treatment of the Structure of Clinker Minerals of Aluminous Cement," by Feng Hsiu-chi (7458/0208/0679), which originally appeared in Kuei-sun-ven Hsueh-pao (Silicale Jovrarl), No 3, 1963, pages 135-141.]

This article is a report on an investigation carried out with microscopes of the effect of firing temperature and cooling methods on the structure of clinker minerals of low ferric aluminous cement. It also summarizes the effect of the mineral composition upon the quality of clinker and cooling methods adopted in industrial production by which the good quality of clinker can be preserved. According to the data obtained from these experiments, a systematic classification of forms and dimensions of minerals which differ greatly from each other in both sintered and melted clinkers is given as additional information for qualitative analysis of rock phase.

The presence of  $C_{12}A_7$  is considered one of the main causes making the tensile strength of sintered clinker usually unstable and abnormal. An investigation of the temperatures for the formation of  $C_{12}A_7$  and its heat treatment shows that  $C_{12}A_7$  can coexist with the other phase mineral  $CA_2$  only under lower temperature in the sintered stage and that the unstable  $C_{12}A_7$  will not convert to  $6CaO-4Al_2O_3-MgO-SiO_2$  and  $6CaO-4Al_2O_3-FeO-SiO_2$  is present.

CHINESE RESEARCH IN PHASE EQUILIBRIUM -- Peiping, Chung-kuo K'o-hsueh Wen-chai (Science Abstracts of China-Technical Sciences Series) No 2, 1963, pp 12-13

[The following is an English abstract of an article, entitled "A Phase Equilibrium Study of the Calcium Fluorine-Lanthanum Oxide System," co-authored by Kuo Chu-kun (6753/

4376/1507) and Yen Tung-sheng (0917/2639/3932). This article was originally published in the Kuei-suan-ven hsueh-pao (Silicate Journal), Volume 1, No 1, 1962, pages 1-8.]

The phase equilibrium relationship of the  $\text{CaF}_2$  -  $\text{La}_{203}$  system has been investigated by the quenching method, together with a detailed study of the crystalline phases by X-ray diffraction and microscopic methods. In this binary system, there exist the  $\text{CaF}_2$  solid solution, C- $\text{La}_2\text{O}_3$  solid solution, and A- $\text{La}_2\text{O}_3$  as solid phases....

By a polycrystalline X-ray diffraction analysis, it is ascertained that the  $\text{CaF}_2$  solid solution and the  $\text{La}_2\text{O}_3$  solid solution have the fluoride type and the C-type structure, respectively. The relationships between the lattice constants and indexes of refraction of the solid solutions as varied in function of their chemical compositions have been determined. The variation of these constants during the transition between these two structure types is discontinuous. Comparing the calculated and measured density values, it is clear that during the formation of fluorite type solid solution, anion vacancies are simultaneously created in the lattice; while in the C-type solid solution lattice, there are excess anions occupying the originally vacant tetrahedral sites.

The incorporation of foreign constituents in the C- $\text{La}_2\text{O}_3$  lattice is the reason for rendering it stable. It has thus been possible to obtain the following values for ideal C- $\text{La}_2\text{O}_3$  structure: lattice constant  $a_0 = 11.408 \text{ \AA}$ , refractive index  $n = 1.905$ , and theoretical density  $d = 5.829 \text{ g/cm}^3$ . The Lorentz-Lorenz molecular refractivity  $R$  was calculated to be  $26.1 \text{ cm}^3$ .

CHINESE RESEARCH ON SILICON -- Shanghai, K'o-hsueh Hua-pao, No 11, Nov 62, p 417

[The following is a full translation of an article, entitled "Organic Silicon," co-authored by Hsing Sheng (1198/3932) and Yao Jung (1031/2837).]

Silicon-rubber is an excellent heat-resisting material. A piece of silicon-rubber of 8.5 mm thickness is able to safely protect a person's hands from burns by an oxygen flame up to  $2,560^\circ \text{ C}$ . After directing a flame of this temperature on a surface of silicon-rubber for one-minute duration, the temperature would rise only  $38^\circ \text{ C}$ ; for a 6-minute duration, up to  $232^\circ \text{ C}$ .

C-O-N-F-I-D-E-N-T-I-A-L

Silicon-resin is an excellent antishock material. An egg placed inside a small ball made of this transparent silicon-resin material still remains perfect and unbroken after the ball is dashed to pieces on the ground. (FOR OFFICIAL USE ONLY)

MATHEMATICAL AND PHYSICAL SCIENCES

1962 ANNUAL MEETING OF THE ASTRONOMICAL SOCIETY OF CHINA -- Peiping, Tien-wen Hsueh pao (Acta Astronomica Sinica), Vol 10, No 2, 1962, pp 208-209

[The following is a full translation of the report of Huang Chien-shu (7806/1696/2885).]

The Astronomical Society of China held its annual meeting in Peiping on 20-26 August 1962. Some 100 delegates attended this meeting, in which some 40 printed copies of reports were discussed. The subjects brought up in the dissertation were most enlightening. The discussion meeting was carried out with great enthusiasm.

During the meeting of the general membership, serious consideration by all was taken after Chang Yu-che (1728/6877/0772), director of the Tzu-chin-shan (Purple Mountain) Observatory, read his paper on "Research on Observation of the Seven Variable Asteroids." This paper stated that by studying the photoelectric flashes emitted by the asteroids, the orbiting cycles and the physical origin of rotation of the seven asteroids was determined, especially the determination of direction of the rotating axes of the asteroids. Many of his colleagues recognized the great significance of his work by the fact that his research work can supply important data in solving many questions about the asteroids. Another paper reported to the entire body of representatives at the meeting by Ch'en Piao (7115/1753) was entitled "A Few Problems on the Utilization of Orbiting Paths of Earth Satellites in the Study of Solar Activities." One of the problems is to make an attempt to utilize artificial satellites to study the physical problems of the sun. Everybody became very enthusiastic over Ch'en Piao's work as this involved the establishment in an unusual way of radical system capable of differentiating all types of perturbation factors and also of making a comprehensive comparison all factors concerned. They all recognized that this kind of strong and constructive, as well as significant, work will enable the writer to obtain preliminary success and also display enthusiasm in doing complex and complicated work.

At the same time, in the meeting, several research problems which are worth further study were taken up from different angles. Fellow astrophysicists realized unquestionably that Ch'en Piao's new coordinate system has its outstanding good points; however, it also has shortcomings. For example, several aspects in the correlation of figures in orbiting are not sufficiently clear, and several correlated figures of the perturbation expressions are in fact very complex mathematically. Geophysicists have indicated support of the need to examine a relationship between atmospheric rotation and terrestrial magnetism and the several important factors governing the observation of gaseous satellites and nongaseous satellites as differentiated by obtained numerical data. Serious colleagues have repeatedly suggested to the comrades engaged in the study of satellite travel that outstanding changes in the ability to respond to light

[radiation]-pressure (Kuang-ya) type of perturbation do occur and that this range of response is greater than the light-pressure of the sun alone (by approximately 3 to 5 times). For this reason, as Ch'en Piao has suggested, the light-pressure has the ability to respond close to zero pressure. Those who have not examined this ability of influence by light-pressure type of perturbation should be able to receive valuable points after consultation. Many comrades at this conference have asked questions about the light curve (V-n) in the report and doubt that this curve will be able to really represent his theory and make correct comparison by observation. All these items of conclusion should often harbor some skepticism. At this conference, Comrade Ch'en Piao explained and answered in detail all of these items in question.

At separate sessions of this conference, the discussion matters took on more color; the shape of activities was leaning forward. All the delegates took part; everybody spoke out with a high sense of responsibility, thus revealing a spirit of democratic solidarity and a new outlook on technological struggle and understanding.

When the discussion opened on the subject of astrophysics, many new points were presented with confusion. Many opposite views were expressed. One report which created a hot debate was on Tai Wen-sai's (2071/2429/6357) paper entitled "The Origin of Rotation of Stellar Association and Fixed Stars." According to an erroneous suggestion by An-pa-chu-mien [foreign name?], the stellar association is the result of collective grouping of material prior to formation of supercompact stars [Supernova]. He believed that the latter, prior to the formation of the star, came from the supercompact nucleus part of the star as a result of an abnormal explosion in a radial direction, thus causing the comparatively small gaseous bodies in a compact surrounding to burst into pieces to form the stellar system and to have this system expanding and rotating rapidly in all directions. At the conference, a number of comrades, however, supported this erroneous concept and established scientific explanations of this theory which were entirely contradictory. Many comrades also believed that the explosive forces in every direction were normal in nature. Some comrades still questioned other doubtful parts of this theory in saying, for example, that the rotating force is insufficient to control the direction of projection in a perpendicular path. Since at present there is a limited amount of material on the observation of the stellar association, the verification of Tai Wen-sai's hypothesis as yet has not been examined; however, these advanced discussions will hereafter be of great assistance. Furthermore, at this meeting Kung Shu-mo (7895/2885/2875) explained also in detail his viewpoint on the three theories of stellar evolution: (the theory of mass fixation in stellar evolution, the theory of micro particles in stellar evolution, and the theory of primary stars in the direction of white dwarf stars).

In the observation of heavenly bodies, representatives in the field of astronomy and surveying have on many occasions held heated debates. At this meeting, these men also brought up many practical and interesting viewpoints through their many years of rich experience. Their discussions were spontaneous but showed great concern in regard to China's decision to revise figures at this general period. They all acknowledge the benefit of improved work as a result of Comrade Wu Shou-hsien's (0702/1343/6343) report entitled "Deviation to Soviet Standard Time and the Revision of Figures During the General Period of 1959 1961." They agreed on the analysis of this report but gradually drifted, during the last few years, into taking an impolite attitude toward using this basic hypothesis which is not entirely perfect; however, they also indicated that the use of the original method which really caused this shift and change of position is still not entirely clear and must be studied further.

At this conference, Comrade Yeh-Shu-hua (5509/0647/5478), in his paper "Longitude Changes from 1935-1955," has prepared an interesting article in which he declared that unusual conditions are approaching the continents of Europe and America, but that since material on this subject is meager, it is difficult at present to make an evaluation. It is hoped that the writer will be able to make further research studies. Comrade Tsou I-hsin (6760/0308/2450), director of the Tientsin International Latitude Station, reported at this meeting on the result of 2 years of observation and his comparative analysis of his observations. A great number of his comrades expressed great satisfaction in his work of observing physical masses and the handling of this material.

Astronomical work of the past inside China received much attention at this conference. Contributions from these sources were numerous at this year's conference. Octogenarian Wang Ying-wei (3769/2019/0251) read a paper at this meeting entitled "Compilation of China's Common Understandings." This paper contained more than 400,000 words and required a period of some 3 years of painstaking research to prepare. This kind of spirit was received with great respect by his comrades. The paper entitled "A Discussion on the Astronomical Work of Wang Hsi-ch'an (3769/6932/7073)," by Hsi Tse-ts'ung (1598/3419/1350), and other such papers also received wide attention.

Besides these reports at this meeting, many dissertations were made in such fields as solar physics, radio astronomy, azimuthal astronomy, celestial dynamics, astroscopic instruments, etc. It can be rightfully said that this conference is successful in the astronomical field. After these reports and discussions, mutual assistance and enlightenment, the acceptance of praise and criticism, and the collection of ideas for the benefit of all, this symposium is considered successful and a good advancement in the entire field of astronomy. (FOR OFFICIAL USE ONLY)

1962 ACTIVITY IN ASTRONOMY IN SHANGHAI -- Peiping, T'ien-Wen-Hsueh-pao (Acta Astronomica Sinica), Vol 10, No 2, 1962, pp 209-210

[The following is a full translation of the above-mentioned article co-authored by Wu Shou-hsien (0702/1343/6343) and Tsou Hui-cheng (6760/1920/2052).]

During April and July 1962, the Shanghai Observatory and the Shanghai Astronomical Society held separate academic seminars and annual conferences. At these meetings, a series of papers and work reports were delivered. Imbued with a spirit of taking positive action, comrades at the meeting welcomed and accepted the mutual exchange of beneficial knowledge.

The first academic seminar of the Shanghai Observatory was held at She-shan (Zo-se) observatory on 27-28 April. Some 40 persons attended this meeting, in which a total of 15 papers and work reports were delivered.

Comrade Yeh-Shu-hua (5549/0647/5478) gave a report on "Condition of Unequal Rotation of the Earth in 1959." Actually this report is a continuation of the research activities of the writer in 1960 with further discussions. In 1960, the writer has utilized astronomical observation data from this observatory and compared notes with Shih Ying-chung (4258/5391/6945). At first, they believed that during the latter part of July 1959, the earth rotation rate actually slowed down by 0.8 millisecond. Now she has made comparisons with data obtained from photographic zenith telescopes situated around the world, 5 Danjon-type astrolabes for the measurement of astronomical time, and 5 atomic frequency standards, besides other material which still needs to be utilized more exactly, including her own revised conclusion of 1960. She now acknowledges that there was no sudden change in the earth rotation rate in 1959; there was during 1959 only a nonuniform seasonal rotation rate for that year for approximately a one-month period. There was actually no change during 1959 from that of any previous years.

In the field of astrodynamics, a paper was presented by Liu Chen-jui (0491/2182/6904), entitled "On the Problems of Computing the Constant Integrate of General Perturbation," and by Ho Miao-fu (0149/1181/4395), entitled, "Calculation of Coefficient of Average Disturbances During the '965' and '985' Periods When the Asteroids Are Subjected to (1-3) and (2-3) Secular Perturbations of Jupiter" and "The Development of Satisfactory Conditions for Continuous Transformation and Its Application to movements of Artificial Satellites." At the conclusion of one of the papers, a writer discussed in depth the types of satisfactory development for continuous transformation; and in his theory, the writer gave evidence which suggested that the continuous and practical application of continuous transformation would be able to eliminate short and long periods of perturbation according to the new Hamilton principle of functional transfer. For this reason, the elimination of short periods and long periods of perturbation according to the Hamilton theory of function will simplify to a great extent some problems of artificial satellite travel.

In the field of photographic astronomy, Comrade Wan Lai (5502/4704) delivered a paper, entitled "Calibration of Travel Paths Variable Stars," in which he pointed out the importance of computing the paths of the variable stars. After comparing the various methods of calibration, he selected 235 short periods of the variable stars to compare with the most recent 2 years of observation. His work on this subject has just been initiated. In addition, work on this subject has also been reported by Liu Chen-jui in his paper entitled "Utilization of True Observations of Asteroids To Determine Discrepancies in the Constellation Chart"; by Comrade Ti Sh-wen (5049/2579/2429) in his paper "A few Questions on Photographic Observation of Artificial Satellites"; by comrade Chin Wen-ching (6855/2429/2417) in his report "Research of Transmission of Electrical Waves from Tokyo and Siccawei [Observatory]"; and by comrade Hsia Sheng-hung (1115/4141/1347) in his work on "Influence on Results of Observation by Astrolabe Due to Discrepancies in the Aberration Constant."

The matter of supplying and redesigning astronomical instruments was discussed by Comrade Yen Lin-shan (7051/2651/1472) in his paper "Calibration and Compensation for Errors in the Installation of the Polar Axis of the 40-cm Binocular Refracting Telescope at She-shan"; by comrade Lo Wei-hua (5012/1792/5478) in his article "A Report on an Experimental Device by Shih Ying-chung (4258/5391/6945)"; and by comrade Yang Fu-min (2799/4395/3046) in his report "Results of Preliminary Redesigning of Lunar Camera."

On 8 July, the Shanghai Astronomical Society held its annual meeting at the Science Hall. At this meeting, Li Heng (2621/3801), director of the Shanghai Observatory, and Kung Hui-jen (7895/1920/0086), assistant director, made separate reports on the subjects of "Developments in Astronomy During Recent Years" and Present and Future Developments on the Subject of Time." Their reports created wide interest among the audience.

Among 15 other papers presented at this meeting, the authors of this article especially singled out the papers of Yeh Shu-hua (5509/0647/5478), entitled "The Problem of Longitudinal Changes on the Continents of Europe and the Americas", comrade Wan Lai, on "Research On Discrepancies of the Zeiss Coordinate Measuring Apparatus"; Comrade Wan Shou-hsien (4702/1343/6343) on "Revision of General Time in Respect to its Deviation from Soviet Standard Time"; and comrade Ho Miao-fu (0149/1181/4395), on "Calibration of Orbit and Perturbation of Planetoids of the Hungarian Group." (FOR OFFICIAL USE ONLY)

SCIENTIFIC AND TECHNICAL EDUCATION

PEIPING GRADUATES -- Peiping, Kuang-ming Jih-pao, 24 Jul 63, p 1

The number of this summer's graduates from higher schools in Peiping already equals the highest annual figure for graduates of such schools in the entire country in preliberation days. This year, there are over 25,000 graduates from the city's more than 40 higher schools, and many are graduates from colleges or special courses newly established in 1958.

These graduates hold degrees in more than 440 fields; whereas in 1956, there were only 313 such areas of specialization. This year, graduates from more than 20 specialized fields, such as upper-atmosphere dynamics, engineering logic, ultrasonics, special automatic precision instruments, synthetic materials processing machinery, chemical engineering machinery, inorganic chemical engineering, light industry machinery, and chemical engineering in the salt industry, are the First group of Chinese-trained specialists in those fields. China University of Science and Technology, Peking Chemical Engineering College, Peking Architectural Engineering College, and Peking Broadcasting College, all established since 1958, graduated their first classes.

SHANGHAI GRADUATES -- Peiping, Kuang-ming Jih-pao, 28 Jul 63, p 1

This year there are over 14,000 graduates from higher schools in Shanghai, more than in any previous year. In addition to the nearly 2,000 workers and peasants who graduated, more than 5,000 children of workers and peasants graduated -- approximately 40 percent of the total number of graduates.

These students all entered the universities in 1958 or 1959 after completing industrial or agricultural studies in middle or spare-time schools.

The majority of this group of worker-peasant students are members of the Chinese Communist Party and of the Youth League.

KWANTUNG PROVINCE GRADUATES -- Canton, Chung-kuo Hsin-wen, 17 Jul 63, p 8

This summer more than 9,400 students graduated from higher schools in Kwangtung Province. This is the largest number of graduates in one year since the liberation.

Sixty percent of the graduates were children of workers and peasants; more than 500 were returned overseas Chinese students or students from Hong Kong and Macao. Some of them were from such minority groups as the Ching, Aili, Hui, Chuang, and P'u man. Most of the graduates were from teachers colleges. South China Teachers College and Kwangtung Teachers College together has more than 2,000 graduates. A relatively large

C-O-N-F-I-D-E-N-T-I-A-L

proportion of the graduates obtained degrees in industry, agriculture, medicine, and science. Chi-nan University, with a predominance of returned overseas Chinese students, and Canton Medical College, which was established in 1958, this year also graduated their first classes. Many of the graduates (mainly those in technology and agriculture) will undergo approximately a year of on-the-job training as arranged by their units.

SOUTH CHINA AGRICULTURAL COLLEGE NOTES PROGRESS -- Canton, Chung-kuo  
Hsin-wen, 9 Jul 63 p 8

Since its founding in 1952, South China Agricultural College has already greatly expanded. The buildings for offices, the Department of Agricultural Sciences and the Department of Sericulture were newly constructed this year. At present, the college has eight departments: Agricultural Sciences, Agricultural Machinery, Gardening, Plant Protection, Soil and Agricultural Chemistry, Sericulture, Veterinary Science, and Forestry. Altogether there are over 3,200 students and more than 500 teachers. At the scientific discussion meeting last year in commemoration of its tenth anniversary, more than 50 reports on production were presented. Now, all instructors are promoting more than 200 scientific research topics.

After 10 years, South China Agricultural College has provided the country with more than 3,500 agricultural, scientific, and technical personnel. As of this summer, 890 graduates will begin work. President of the College is Prof Ting Ying (0002/7336), a paddy rice expert.

ENROLLMENT AT PEOPLE'S UNIVERSITY OF CHINA -- Peiping, Jen-min Jih-pao  
24 Jul 63, p 6

The People's University of China reports the enrollment of 4,550 new correspondence students from the 14 districts of Peiping, Shih-chia-chuang, Tientsin, Ts'ang-chou, T'ai-yuan, Chin-tung-nan, Tsinan, Ch'ing-tao, Ch'ang-wei, Hu-ho-hao-t'e, Pao-t'ou, Chin'chou, Chin-hsi, and T'ang-shan.

NANKING GRADUATES -- Peiping, Kuang-ming Jih-pao, 23 Jul 63, p 2

On the evening of 13 July, more than 8,000 graduates from higher schools in the Nanking area gathered on the athletic field of Nanking University. Alternate Secretary of the Kiangsu Party Committee P'eng Ch'ung (1756/0394), on behalf of the Party Committee, warmly congratulated the students.

FOOCHOW UNIVERSITY GRADUATES -- Canton, Chung-kuo Hsin-wen, 17 Jul 63, p 8

This year, Foochow University, which was established in 1958, graduated its first class of technical students. This is the first time that industrial construction workers have been trained in Fukien Province. There were altogether 276 graduates in the following 7 special fields: electric machinery and electric equipment, metal heat processing technology, machine building techniques and equipment, electric power plants, networks, and systems, basic organic synthesis, inorganic chemical engineering, and coal mining.

CHI-NAN UNIVERSITY GRADUATES -- Canton, Chung-kuo-wen, 22 Jul 63, p 8

This year, Chi-nan University, which was founded in Canton in the fall of 1958, graduated its first class. Over 70 of the more than 200 graduates were returned overseas Chinese students.

Chi-nan University has the following eight departments: Chinese, History, Foreign Languages, Economics, Mathematics, Physics, Chemistry, and Biology. Except for the Economics, Chemistry, and Physics departments, the departments all had graduates this year. These students have completed 5 years of study.

C-O-N-F-I-D-E-N-T-I-A-L

INTERNATIONAL COOPERATION

CHINA AND NORTH VIETNAM HOLD THIRD SCIENTIFIC AND TECHNOLOGICAL MEETING --  
Peiping, Kuang-ming Jih-pao, 20 Jul 63, p 3

From 9 July to 18 July 1963, China and North Vietnam, in Hanoi, held the third meeting of the organization for the implementation of scientific and technological cooperation, where they discussed a one-year cooperation plan and signed a protocol. The two countries, according to the protocol, will carry out cooperation in many fields, such as exchange of technical personnel and scientific and technological materials.

Signing the protocol for the Chinese was Wu Heng (2976/5899), chairman of the Scientific and Technological Cooperation Delegation and Vice-Chairman of the State Scientific and Technological Commission.

BIOGRAPHIC INFORMATION

[The following biographic information on selected Chinese Communist scientific and technical personnel was taken from the sources cited in parentheses.]

CH'AI Tien-ying, Scientific-Research Institute of Agrophysics, All-Union Academy of Agricultural Sciences, USSR; coauthor with V. M. Prokhorov of article, "Diffusion of  $Ce^{144}$  in Soil," in Russian; received for publication 21 October 1962. (Moscow, Akademiya Nauk SSSR, Poch- vovedeniye, No 7, Jul 63, pp 107-108)

CHANG Chieh (1728/3381)

WANG Tsung-i (3769/1350/4400)

CH'EN Hsiao-chou (3088/1321/1352)

LIN Yung-lieh (2651/3057/3525)

HSIEH Hsi-jan (0673/3588/3544), deceased  
All of the Tsinghai Work Station, Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article, "Fauna of the Huang-shui River Valley in Tsinghai Province." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 63-74)

CHANG Ch'un-lin (1728/2504/7207), Institute of Zoology, Chinese Academy of Sciences; author of an article, "A List of the Fishes and a New Species From Hsi-shuang-pan-na, Yunnan. "III". (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 95-99)

CHANG Ch'un-lin (1728/2504/7207)

WANG Wen-pin (3769/2429/3453)  
Both of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article, "A Preliminary Report on the Fish of Tibet." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 529-537)

CHANG Ho-yu (1728/7729/1342), Institute of Parasitic Diseases, Chinese Academy of Medical Sciences; author of an article, "The Anatomy of the Trigeminal Nerves in the Peking Duck." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 441-453)

CHANG Hsi (1728/3886), Institute of Oceanography, Chinese Academy of Sciences; author of an article, "On the Presence of the Genus Asymmetron in the China Sea and the Geographic Distribution of Branchiostomabelcheri (Gray)." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 525-529)

CHANG Tun-hou (1728/2415/0624), Biology Department, Heng-yang Medical College; author of an article, "Ecological Studies on Larvae of Culex pritaeniorhynchus." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 46-62)

CHANG Yu-ming, Moscow Higher Technical School imeni N. E. Bauman; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of the Effect of Axial Clearance in Double Lattices," in Russian. (Moscow, Vechernyaya Moskva, 10 Jun 63, p 4)

CHAO Chin-lun, Moscow Higher Technical School imeni N. E. Bauman; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of the Elastic Flattening of Rollers and Bars During Rolling," in Russian. (Moscow, Vechernyaya Moskva, 10 Jun 63, p 4)

CH'EN Chia-jui (3088/0857/3843)

TAI Ai-yun (2071/1947/0061)

Both of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article, "The Plankton Crustaceans in the Shui-feng Reservoir on the Ya-lu River, the Boundary Between China and Korea." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 152-170)

CH'EN Chia-jui (3088/0857/3843)

TAI Ai-yuan (2071/1947/0061)

Both of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article, "The Copepoda of the Wu-li Lake, Wu-hsi, Kiangsu Province. I. Calanoida." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 99-119)

CH'EN Hsin-t'ao (7115/1800/7118)

HSU Ping-k'un (1776/4426/6924)

The above are co-authors of an article, "A Study of the Phenomenon of Concentration of *Trombicula akamushi* var. *deliensis*." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, p 458)

CH'EN Hsin-t'ao (7115/1800/7118)

HSU Ping-k'un (1776/4426/6924)

Both of the Department of Parasitology, Chungshan Medical College, and co-authors of an article, "The Systematic Position of the Species of *Acomatacarus* in China." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 489-495)

CH'EN I (7115/5030), Department of Biology, Nanking University; author of an article, "An Account of the Leeches Found in Nanking and Vicinity With Description of a New Species, *Placobdella Sinensis*." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 515-525)

CH'EN Ta-yuan (7115/1129/0337), Institute of Zoology, Chinese Academy of Sciences; author of an article, "A Preliminary Report on the Effect of Mantle Tissue Extract of *Lamprodulaleai* on Healing of Experimental Wound in the Mouse." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 9-17)

CHENG Kuang-mei (6774/0342/5019), Department of Biology, Peking Normal University, author of an article, "Ecological Distribution of Birds on the Southern Hillside of the Tsinling Mountains." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 465-474)

CHENG Kuo-chang (6774/0948.4545), Institute of Zoology, Chinese Academy of Sciences; author of an article, "On the Forms of the Intramural Ganglia of the Mammals." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 17-21)

CHENG Tso-hsin (6774/0155/2450)

CHENG Pao-lai (6774/1405/6336)

Both of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article, "On Birds From the Hsi-shuang-pan-na Area and Vicinity in Yunnan Province. I." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 53-70)

CHENG Tso-hsin (6774/0155/2450)

CHENG Pao-lai (6774/1405/6336)

HSI Yao-hua (0405/5069/5478)

CHOU Fu-chang (0179/4319/3864)

WANG Hsien-min (3769/0341/2404)

YIN Ta-yun (1438/6671/0061)

KU Hsiang-ka (6328/4161/0474)

CH'IEH Yen-wen (6929/3601/2429)

All of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of the article "A Preliminary Survey of Birds of Hunan Province Part Two. Passeriformes." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 97-122)

CHENG Tso-hsin (6774/0155/2450), Zoology Department, Chinese Academy of Sciences

T'AN Yao-k'uang (6223/5069/0562), Zoology Department, Chinese Academy of Sciences

LO Ch'u'an-sheng (5012/3123/4563), Biology Department, Southwestern Normal College

MIN Chih-lan (7036/5347/5695), Biology Department, Northwest University  
All of the above are co-authors of article, "Taxonomic Studies on Birds from Southwestern Szechwan and Northwestern Yunnan. Part I. Non-Passeriformes." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 537-555)

CHENG Tso-hsin (6774/0155/2450)

CHENG Pao-lie (6774/1405/6336)

Both of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article, "On Birds From the Hsi-shuan-pan-na Area and Vicinity in Yunnan Province." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 74-95)

CHI Hsiao-yang, Moscow Power Engineering Institute; coauthor with M. M. Yefaneshnikov of article, "Discomfort Brilliance of a Single Brilliant Source," in Russian. (Moscow, Svetotekhnika, No 4, Apr 63, pp 1-6)

CH'IEH San-ch'iang (6929/0005/1730), Director, Institute of Atomic Energy, Chinese Academy of Sciences, on 1 July 1963, met with Yao I (1202/3015), one of the five Chinese who had been forced to leave the Soviet Union. (Peiping, Kuang-ming Jih-pao, 2 Jul 63, p 1)

CH'IN Su-mei (4440/4790/5019)

CH'IN Tsai-hsien (4440/0961/6343)

Both of the Biology Department, Anhwei University, and co-authors of an article, "The Structure of the Liver in the Embryonic Development of the Peking Duck, *Anas domesticus*." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 21-33)

CHU Ching (2612/7231)

YEN Chih-t'ang (0917/1807/1016)

Both of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article "Burrows Lodges, and Home Ranges of the Muskrat, *Ondatra Zibethica* Linne." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 474-489)

CHU Hung-fu (2612/1738/1788)

WANG Lin-yao (3769/2651/3852)

Both of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article, "A Synoptical Study of the Chinese Sawflies of the Subfamily Athaliinae (Hymenoptera, Tenthredinidae)." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 505-515)

FAN Tsai-yun, author of invention No 153315 (753257/24-7 from 24 November 1961), "High-Tension Cable," listed in the 27 June 1963 Publication Registered Inventions in the USSR. (Moscow, Byulleten' Izobreteniy i Tovarnykh Znakov, No 5, Mar 63, p 24)

FEI Hung-liang, Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov; coauthor with R. M. Panich, D. M. Sandomirskiy, and S. S. Voyutskiy of article, "Investigation of the Compatibility of Rubbers in Latex Film," in Russian; received for publication 17 May 1962. (Moscow, Akademiya Nauk SSSR, Kolloidnyy Zhurnal, Vol 25, No 4, Jul/Aug 63, pp 455-458)

HO I-hsun (0149/3015/0534), Institute of Parasitic Diseases, Chinese Academy of Medical Sciences; author of an article "Notes on Some Abnormal Specimens of Schistosoma Japonicum." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 453-459)

HO I-hsun (0149/3015/0534), Institute of Parasitic Diseases, Chinese Academy of Medical Sciences; author of an article, "Histochemical Studies on Schistosoma Japonicum. 1. The Distribution of Nucleic Acids, Amino Acids, Glycogen, and Phosphatases in Adult Worms." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 433-441)

HO Yang-tsan, Moscow Power Engineering Institute; author of article, "Approximate Estimates of Transitional Processes in Electrical Systems During Change in the Rate of the Generators," in Russian; received for publication 16 June 1962. (Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Energetika, No 6, Jun 63, pp 7-11)

HSIA Wu-p'ing (1115/2976/1627), Institute of Zoology, Chinese Academy of Sciences, author of an article, "On the Population and Home Range of the Greater Wood Mouse, Apodemus Speciosus Peninsulae Thomas." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 180-183)

HSIEH Chih, coauthor with V. L. Kozis and I. S. Rokotyan of article, "Calculation of Flow Distribution Capacity in Networks With the Aid of a Computer," in Russian. (Moscow, Elektricheskiye Stantsii, No 9, Sep 62, pp 52-57)

C-O-N-F-I-D-E-N-T-I-A-L

HSU Le-t'ien, Institute of Cardiovascular Surgery, Academy of Medical Sciences USSR; coauthor with Yu. Yevteyev and B. A. Konstantinov of article, "Transposition of the Aorta and the Pulmonary Artery (Clinic, Diagnostics, Surgical Treatment)," in Russian; received for publication 3 April 1962. (Moscow, Grudnaya Khirurgiya, No 4, Jul/Aug 63, pp 3-12)

HU T'en-ch'i

Author of article, "Medicinal Plants on the Tibetan Plateau of the People's Republic of China," in Russian. (Moscow, Apteknoye Delo, Vol 11, No 4, Apr 62, p 71)

LIUANG Hsiu-chung, Institute of Cardiovascular Surgery, Academy of Medical Sciences USSR; coauthor with V. A. Bukharin and V. V. Ishchenko of article, "Rare Form of Defect in the Development of the Atrioventricular Canal," in Russian. (Moscow, Grudnaya Khirurgiya, No 4, Jul Aug 63, pp 86-88)

K'UNG Fan-yao (1313/4907/3852)

SHIH Kuo-li (4258/0948/4109)

The above are coauthors of an article, "The Discovery of Pygarginema cervi Lubimov, 1955 (Nematoda, Ascaropsinae) in China." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, p 573)

KUO Chen-ch'uan (6753/2182/3123), Biology Department, Peking University; author of an article, "On the Generic Name Chenospirura (Nematoda: Spiruridae)." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 122-123)

LI Ch'ang-chiang (2621/7022/3068); author of an article "The Finding of the Male Amblyomma cyprium Neumann in Ho-kou, Yunnan Province." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, p 571)

LI Kuo-chen (2621/0948/2825), Chairman, Department of Soils and Fertilizers, Ningsia Hui Autonomous Region Institute of Agricultural Sciences, gave a press conference concerning the soils, fertilizers, and other agricultural information in Ningsia Hui Autonomous Region. (Peiping, Kuang-ming Jih-pao, 25 Jul 63, p 2)

LIU Lien-chu (0491/6647/3796)

T'UNG Yun-shan (0104/0336/1472)

Both of the Department of Parasitology, Seventh Military Medical College, and co-authors of an article, "A Morphological Description of the Female Flea -- *Echinophaga ochotona* Li, 1957." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 144-145)

LI Shih-lin; author of article, "On the Asymptotic Power of Nonparametric Criteria Analogous to Statistic  $\chi^2$ ," in Ukrainian. (Kiev, Dopovidi Akademiy Nauk Ukraynskoy RSR, No 7, 16 Jul 63, pp 856-861)

LI Tao-ming; coauthor with N. T. Kudryavtsev, Ya. B. Psheluski, and I. I. Potapov of invention No 153159 (752116/22-2 of 16 November 1961), "Method of Electrolytic Chrome Plating," under Class 48. Chemical Treatment of Metal Surfaces, and listed in the 13 June 1963 Publication of Registered Inventions in the USSR, (Moscow, Byulleten' Izobreteniy i Tovarnykh Znakov, No 4, Feb 63, p 41)

LIU Wei-te (0491/4850/1795), Institute of Applied Entomology, Chinese Academy of Sciences; author of an article "On the Tabanid Flies From the Districts of Yangtze Valley." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 119-130)

LIU Yueh-ying (0491/2588/5391), Institute of Zoology, Chinese Academy of Sciences; author of an article, "On the Fresh Water Gastropods From Pai-yang-tien and Vicinity." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 132-152)

LIU Yung-lung; coauthor with P. M. Loshkarev of article, "Glycosides of *Erysimum Canescens* Roth (Minsk Form): Report 2," in Russian; received for publication 24 January 1963. (Moscow, Meditsinskaya Promyshlennost' SSSR, No 7, Jul 63, pp 18-23)

C-O-N-F-I-D-E-N-T-I-A-L

MEN Fu-lu (7024/4395/6922), Institute of Civil Engineering, Chinese Academy of Sciences; author of article, "Approximate Solutions of One Dimensional Problems of Consolidation and Secondary Time Effects of Clays." (Peiping, Shui-li Hsueh-pao [Journal of Hydraulic Engineering], No 1, 24 Feb 63, pp 44-55)

MENG Hsien-chen, Leningrad, Institute of Semiconductors, Academy of Sciences USSR; author of article, "On the Resonance Line Width of an Anisotropic Ferromagnetic," in Russian; received for publication 19 March 1963. (Moscow, Akademiya Nauk SSSR, Fizika Tverdogo Tela, Vol 5, No 7, Jul 63, pp 1988-1999)

PING Chih (4426/1807)

T'AN Hsing-kuang (3382/2502/0342)

Both of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article, "On the Hydrostatic Mechanism of the Carp." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 33-53)

SHEN Yung-ch'iu, Moscow Higher Technical School imeni N. E. Bauman; author of article, "Effect of the Operating Conditions and the Size of the Gap in Coupling Parts Made of Plastic and Metal On the Value of the Friction Coefficient," in Russian; received for publication 30 October 1962. (Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Mashinostroyeniye, No 3, 22 Jun 63, pp 82-86)

SUN Hsi-yen (1327/1585/8827), deputy director of obstetrics, First Hospital of Soochow Medical College. (Peiping, Kuang-ming Jih-pao, 26 Jul 63, p 3)

SUN Ju-yung (1327/0320/3144)

FANG Hsi-hsieh (2455/0823/0673)

KAO Tse-lin (7559/3419/2651)

CHANG Yu-shu (1728/3768/2579)

LIN Shao (2651/2626)

All of the Biology Department, Peiping Teachers College, and co-authors of an article, "Ecology of Small Rodents in the Forest Area of the Ch'ai Ho (2693/3109)." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 21-37)

SUNG Ta-hsiang (1345/1129/4382), Institute of Zoology, Chinese Academy of Sciences; author of an article, "Studies on the Culturing of Daphnia magna Straus (Crustacea, Cladocera)." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 62-73)

T'ANG Wen-hsia; coauthor with Viktor I. Spitsyn and I. D. Kolli of Article to be published in near future, "Study of Complex Compounds of 3- and 5-Valent Molybdenum With Thiourea," in Russian. (Moscow, Akademiya Nauk SSSR, Zhurnal Neorganicheskoy Khimii, Vol 8, No 8, Aug 63, p 2017)

TING Yen, Candidate of Medical Sciences, Moscow Medical Institute imeni I. M. Sechenov; author of article, "The Course of Pregnancy and Labor in Patients With Anemia," in Russian; received for publication 30 March 1962. (Moscow, Akusherstvo i Ginekologiya, No 4, Jul/Aug 63, pp 70-75)

TSOU Chu-lien, Joint Institute of Nuclear Research; coauthor with A. A. Tyapkin of article, "Obtaining a Charge in the Spark Cell Along the Particle Track," in Russian. (Moscow, Pribori i Tekhnika Eksperimenta, No 5, Sep/Oct 62, pp 84-87)

C-O-N-F-I-D-E-N-T-I-A-L

TS'UNG Chin-yang, Department of General Chemistry, Leningrad Technological Institute; coauthor with V. Ya. Kul'ba and V. Ye. Mironov of article, "Combination of Trivalent Thallium With 4,7-Phenanthroline," in Russian; received for publication 22 May 1962. (Moscow, Akademiya Nauk SSSR, Zhurnal Neorganicheskoy Khimii, Vol 8, No 3, Aug 63, pp 1846-1851)

TU Le-t'ien; coauthor with V. I. Baranov and V. I. Korobkov of article, "On the Geochemistry of Uranium and Thorium in Granite Rock in the Kiziltau Massif (Central Kazakhstan): Report 2. Forms of Occurrence of Radioactive Elements in Granite Rock," in Russian. (Moscow, Izvestiya Akademii Nauk SSSR, Geokhimiya, No 5, May 63, p 110)

WANG Ch'ang-ch'ing, Kiev State University imeni T. G. Shevchenko; author of dissertation for the scientific degree of Candidate of Physicomathematical Sciences, "Investigation of Parametric Amplifiers of Ultrahighfrequency Range," in Russian. (Kiev, Pravda Ukrainskay, 14 Jun 63, p 4)

WANG Fu-chun

CH'AO T'ao-nan

Coauthors with Yu. V. Norsceyev and V. A. Khalkin of article, "The Positive Ion of Astatine in Nitric Acid Solution," in Russian; received for publication 26 April 1962. (Moscow-Leningrad, Akademiya Nauk SSSR, Radiokhimiya, Vol 5, No 3, 26 Jun 63, pp 351-355)

WANG Huan-pao (3769/3562/5508)

CHENG Kuo-chang (6774/0948/4545)

Both of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article "Spontaneous Atherosclerosis in the Rhesus Monkeys." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 459-465)

WANG Hung-li (3769/7703/0448), graduating student from Department of Medicine, Shanghai Second Medical College; interning at Shanghai Nanyang Hospital. (Peiping, Kuang-ming Jih-pao, 23 Jul 63, p 2)

WANG Kang (3769/0474), Deputy Director, Heilungkiang Provincial Academy of Forestry Sciences; wrote an article on his own understanding of the operation of an experimental timber tract. Kuang-ming Jih-pao, 5 Jul 63, p 2)

WANG Keng-nan (3769/5087/0509), Biology Department, Nanking University; author of an article, "Notes on the Ecology and Life History of Argulus (Parasitic Copepoda) From the Fresh Water Fishes of China." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 170-180)

WANG Keng-nan (3769/5087/0589), Biology Department, Nanking University; author of an article, "Two New Species of Parasitic Copepods From Kung-ji sp." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 1-11)

WANG Sung (3076/2646)

IU Ch'ang-k'un (7120/7022/0981)

KAO Yao-t'ing (7559/5069/0080)

IU T'ai-ch'un (5684/03077/2504)

All of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article, "On the Mammals From Southwestern Kwangsi, China." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, pp 555-570)

WANG Tsung-I (3769/1350/4400)

WANG Sung (3076/2646)

Co-authors of an article, "The Discovery of a Flying Fox (Pteropus giganteus Brunnich) From Tsinghai Province, Northwestern China." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, p 494)

WU I-hsin, Moscow Textile Institute; coauthor with A. V. Ditskiy of article, "Investigation of Friction Coupling in the Tempering Mechanism and Base Tension of the Zul'tser Machine Tool," in Russian; received for publication 6 December 1962. (Ivanovo, Izvestiya Vysshikh Uchebnykh Zavedeniy, Tekhnologiya Tekstil'noy Promyshlennosti, No 3, 27 Jun 63, pp 132-139)

WU Jung (0702/5816), Biology Department, Fu-tan University; author of an article, "Studies on the Effects of the Brain Hormone on Pupation in *Philosamia cynthia Ricini*." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 1-8)

WU Shang-wen (0702/1424/2429); author of an article, "Cervus elaphus -- A new Host of the Blood Fluke *Ornithobilharzia*." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 4, Dec 62, p 464)

WU Shu-ch'ing (0702/3219/0615)

YIN Wen-chen (1438/2429/4176)

Both of the Institute of Zoology, Chinese Academy of Sciences, and co-authors of an article, "A New Species of Lung Nematodes Belonging to the Genus *Bicaulus* (Nematode: *Protostrongylidae*)."  
(Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 13, No 1-4, Dec 61, pp 16-21)

YANG Fu-hsi (2799/1788/2569), Chungshun Medital College; author of an article, "Studies on Strigeid Trematodes from Birds. II. On a New Genus and Three New Species in *Strigeidae*." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 1, Mar 62, pp 119-130)

YEH Ju-chiu, Leningrad State University; coauthor with I. A. Tserkov-nitskaya of article, "Use of Complexones for Coulometric Titration of Thorium," in Russian; received for publication 12 December 1961. (Moscow, Akademiya Nauk SSSR, Zhurnal Analiticheskoy Khimii, Vol 18, No 7, Jul 63, pp 822-828)

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Central Intelligence Agency



Washington, D.C. 20501

7 September 2004

Ms. Roberta Schoen  
Deputy Director for Operations  
Defense Technical Information Center  
7725 John J. Kingman Road  
Suite 0944  
Ft. Belvoir, VA 22060

Dear Ms. Schoen:

In February of this year, DTIC provided the CIA Declassification Center with a referral list of CIA documents held in the DTIC library. This referral was a follow on to the list of National Intelligence Surveys provided earlier in the year.

We have completed a declassification review of the "Non-NIS" referral list and include the results of that review as Enclosure 1. Of the 220 documents identified in our declassification database, only three are classified. These three are in the Release in Part category and may be released to the public once specified portions of the documents are removed. Sanitization instructions for these documents are included with Enclosure 1.

In addition to the documents addressed in Enclosure 1, 14 other documents were unable to be identified. DTIC then provided the CDC with hard copies of these documents in April 2004 for declassification review. The results of this review are provided as Enclosure 2.

We at CIA greatly appreciate your cooperation in this matter. Should you have any questions concerning this letter and for coordination of any further developments, please contact Donald Black of this office at (703) 613-1415.

Sincerely,

*Sergio N. Alcivar*

Sergio N. Alcivar  
Chief, CIA Declassification Center,  
Declassification Review and Referral  
Branch

Enclosures:

1. Declassification Review of CIA Documents at DTIC (with sanitization instructions for 3 documents)
2. Declassification Status of CIA Documents (hard copy) Referred by DTIC (with review processing sheets for each document)

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## Processing of OGA-Held CIA Documents



The following CIA documents located at DTIC were reviewed  
by CIA and declassification guidance has been provided.

OGA Doc ID	Job Num	Box	Fltr	Doc	Doc ID	Document Title	Pub Date	Pages	Decision	Proc Date
AD0335308	78-03117A	194	1	23	4363	Scientific Information Report Chemistry And Metallurgy (26)	3/7/1963	71	Approved For Release	3/25/2004
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